mid-IR wavelength of (2.7 - 3.2) microns;
selecting a beam spot controller mechanism, said spot controller consisting of an internal magnetic coupler integrated inside the laser cavity having a pin-hole size of about (2-10) mm;
focusing the output beam to a spot size of about (0.05-2.5) mm on the corneal surface;
selecting a scanning mechanism for scanning said selected laser output beam;
coupling said laser beam to a scanning device for scanning said laser beam over a predetermined corneal surface area to remove corneal tissue, whereby a patient's vision is corrected by reshaping the cornea.

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~~21~~ 3. A method for improving presbyopic patient's vision by removing a portion of the sclera tissue from an eye of a patient, said method comprising the steps of:
selecting an ablative laser for removing sclera tissue by focusing said ablative laser to a spot size of about (5-800) microns on the corneal surface;
selecting a scanning mechanism for scanning said ablative laser;
coupling said ablative laser to a scanning device for scanning said ablative laser over a predetermined area outside the corneal limbus to remove said sclera tissue, whereby a patient's near vision is improved by the increase of ~~the lens accommodation~~ the corneal, lens accomodation.

~~22~~. A method of claim ~~21~~ 3, in which said ablative laser is a gas laser having an output wavelength of about (2.7-3.2) microns, energy per pulse of about (0.5-15) mJ on corneal surface and a pulse duration less than 150 nanoseconds;

~~23~~ 5. A method of claim ~~21~~ 3, in which said ablative laser is a mid-IR solid-state laser having a wavelength of about (2.7-3.2) microns.

~~24~~ 6. The method of claim ~~21~~ 3, in which said ablative laser includes pulsed radiation generated by transverse electrical discharge carbon dioxide laser which is frequency-doubled into a laser having a wavelength of about (5.6-6.2) microns, energy per pulse of about (2-15) mJ on the corneal surface.

~~25~~ 7. A method of claim ~~21~~ 3, in which said ablative laser is a diode laser having a wavelength of about 980 nm.

~~26~~ 8. A method of claim ~~21~~ 3, in which said ablative laser is a diode laser having a wavelength of about (1.4 - 2.1) microns.

~~27~~ 9. A method of claim ~~21~~ 3, in which said ablative laser is a diode-pumped Er:YAG laser having a wavelength about 2.9 microns and a pulse duration less than 500 microseconds.

~~28~~ 10. A method of claim ~~21~~ 3, in which said ablative laser is an ultraviolet laser having a wavelength of about (190-310) nm.

~~29~~ 11. A method of claim ~~21~~ 3, in which said sclera tissue is coagulated by a laser having a wavelength of about (0.5-3.2) microns, an average power of about (0.1-5.0) W on the corneal surface, spot size of about (0.1-1.0) mm, and a pulse duration longer than about 200 microseconds.

~~30~~ 12. A method of claim ~~21~~ 3, in which said ablative laser is fiber-coupled and combined with a coagulation laser and delivered to the corneal surface.

~~31~~ 13. A method of claim ~~21~~ 3, in which said sclera tissue is ablated in radial patterns having a length about (2.5-3.5) mm and a depth about (400-700) microns.

~~32~~ 14. A method of claim ~~21~~ 3, in which said sclera tissue is ablated in radial patterns by a computer-controlled scanning mechanism.

~~33~~ 15. A method of claim ~~21~~ 3, in which said sclera tissue is ablated in radial patterns by a translation mechanism.

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